

**CLAIMS:**

1. A method of treatment of an extracorporeal or isolated organ, comprising contacting the organ with a composition including a metal carbonyl compound or pharmaceutically acceptable salt thereof and at least one pharmaceutically acceptable carrier.

2. A method according to claim 1 wherein the metal carbonyl makes available carbon monoxide (CO) to limit post-ischaemic damage.

3. A method according to claim 1 wherein said metal carbonyl makes CO available by at least one of the following means:

- 1) CO derived by dissociation of the metal carbonyl is present in the composition in dissolved form;
- 2) on contact with a solvent the metal carbonyl releases CO;
- 3) on contact with a tissue, organ or cell the metal carbonyl releases CO;
- 4) on irradiation, the metal carbonyl releases CO.

4. A method according to any one of claims 1 to 3 wherein said organ is extracorporeal.

5. A method according to any one of claims 1 to 3 wherein said organ is inside or attached to the body but isolated from the blood supply.

6. A method according to any one of claims 1 to 5 wherein the contacting step includes perfusing said organ with said composition.

7. A method according to any one of claims 1 to 6 wherein the metal carbonyl is a compound of the formula  $M(CO)_x A_y$  where  $x$  is at least one,  $y$  is at least one,  $M$  is a metal, the or each  $A$  is an atom or group bonded to  $M$  by an ionic, covalent or coordination bond but is not  $CO$ , and in the case where  $y > 1$  each  $A$  may be the same or different, or a pharmaceutically acceptable salt of such a compound.

8. A method according to claim 7 wherein  $M$  is a transition metal.

9. A method according to claim 7 or claim 8, wherein  $A$  is selected from neutral or anionic ligands such as halide or derived from Lewis bases and having  $N$ ,  $P$ ,  $O$ ,  $S$  or  $C$  as the coordinating atom.

10. A method according to any one of claims 1 to 6 wherein the metal carbonyl compound has the formula

$M(CO)_x A_y B_z$  where

$M$  is  $Fe$ ,  $Co$  or  $Ru$ ,

$x$  is at least one,

$y$  is at least one,

$z$  is zero or at least one,

each  $A$  is a ligand other than  $CO$  and is monodentate or polydentate with respect to  $M$  and is selected from the amino acids

alanine

arginine

asparagine  
aspartic acid  
cysteine  
glutamic acid  
glutamine  
glycine  
histidine  
isoleucine  
leucine  
lysine  
methionine  
phenylalanine  
proline  
serine  
threonine  
tryptophan  
tyrosine  
valine

$[\text{O}(\text{CH}_2\text{COO})_2]^{2-}$  and  
 $[\text{NH}(\text{CH}_2\text{COO})_2]^{2-}$ , and

B is optional and is a ligand other than CO.

11. Use of a metal carbonyl compound in the manufacture of a medicament for treatment of an isolated organ to limit post-ischaemic damage in an isolated organ which is inside or attached to the body but isolated from the blood supply.

12. Use according to claim 11 wherein the metal carbonyl is a compound of the formula  $\text{M}(\text{CO})_x\text{A}_y$  where x is at least one, y is at least one, M is a metal, the or each A is an atom or group bonded to M by an ionic, covalent or coordination bond but is not CO, and in the

case where  $y > 1$  each A may be the same or different, or a pharmaceutically acceptable salt of such a compound.

13. Use according to claim 12 wherein M is a transition metal.

14. Use according to claim 12 or claim 13, wherein A is selected from neutral or anionic ligands such as halide or derived from Lewis bases and having N, P, O, S or C as the coordinating atom.

15. Use according to claim 11 wherein the metal carbonyl compound has the formula

$M(CO)_x A_y B_z$  where

M is Fe, Co or Ru,

x is at least one,

y is at least one,

z is zero or at least one,

each A is a ligand other than CO and is monodentate or polydentate with respect to M and is selected from the amino acids

alanine

arginine

asparagine

aspartic acid

cysteine

glutamic acid

glutamine

glycine

histidine

isoleucine

leucine

lysine

methionine  
phenylalanine  
proline  
serine  
threonine  
tryptophan  
tyrosine  
valine

$[\text{O}(\text{CH}_2\text{COO})_2]^{2-}$  and  
 $[\text{NH}(\text{CH}_2\text{COO})_2]^{2-}$ , and

B is optional and is a ligand other than CO.